

AMATEUR RADIO



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AMATEUR RADIO

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INDEX

Editorial	3	Series—Parallel Switch for the Zepp.	15
Adding a P.A. to the Exciter Unit	4	28 and 56 M.C. Notes	16
A Modern 5-Metre Exciter Transmitter	8	R.A.A.F. Wireless Reserve Notes	18
Does the Meter Move?	11	Divisional Notes:—	
What is Your Output?	13	N.S.W. Division	20
Station Description — VK2QE ..	14	Victorian Division	22
Beru Contests, 1937	14	Queensland Division	26
Correspondence	15	South Australian Division	27

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"Why Not An Experimenters' Section?"

Many reams have been written over the last few years, in all the Ham Magazines of the world on the lack of experimental sense in the Amateur of to-day. (The proof of this contention is obvious to anyone who cares to make the observation. "Amateur Radio" has more than once appealed for a closer regard to a definite line of experiment rather than haphazard QSO's, and collections of "wallpaper." Ham Radio is so easy to break into now, DX is such easy prey with modern equipment that there SEEM no more fields left to conquer to the new Ham, after a few months' activity. In many cases he drifts out of the game entirely at that period, while the Old-timer continues with undiminished enthusiasm, year after year. The reason? Well — his outlook is different; he is not content to merely build a transmitter from an article in QST or Amateur Radio, he wants to know why it works and if there is anything new in the design; to him it is not "the ultimate" in transmitters, but merely a stepping-off place for still greater efficiency and still more radical design (equally important 99 times out of 100 he specialises in some branch of the game). Of course a number of the newer Hams can range themselves with the best of the Old-timers, but it is not of them that we are concerned; it is the majority, the rank and file of Amateurs to-day. Can THEY be stimulated to develop an Experimental Sense?

Our previous Editorial on the subject brought forward the suggestion from a number of sources, that a purely Experimental Section of the Institute be formed. The chances of increasing one's knowledge of Radio would be considerably easier, one of the biggest aims of our Institute would be fulfilled, and with such a section in existence, the chances

of encouraging newer Hams to delve deeper into the mysteries of their Hobby would be immeasurably greater. Imagine the close Inter-state liaison on technical matters if all States started such a section in their Division. Imagine the co-ordinated effort that would be possible in tackling any problem. Finally imagine the elevation of the Institute in the eyes of the "people who know" and the consolidation of our position in respect to our Amateur frequencies. Perhaps we are dreaming a little — who knows! But it is grand to dream of something which, if realised in fact, would improve the present state of things out of all knowledge.

No definite lead as to the detailed lines along which such a section could function, are necessary, not only is it outside the scope of this page, but is also a matter purely for the Divisions concerned. However, lectures of a technical nature by men well versed in the subject to be discussed would, of course, be one obvious line. The section could perhaps cater for men who desired instruction in higher Maths and, the important matter mentioned above, "The co-ordinated effort that would be possible," current problems would stand a thousand times greater chance of getting results than the present haphazard methods used. In Victoria the Ultra High Frequency Section, newly formed, provides the first step by genuinely experimentally-minded members to bond themselves together. But this is a specialised section. Our aim discussed in this Editorial is a general experimental section, with, if necessary, sub-sections for specialised work.

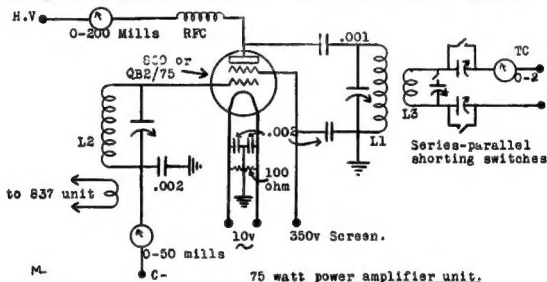
A section such as this should receive solid support from all Hams who have an interest in their Hobby for its own sake. Whilst providing entertainment, that aspect of our Hobby should be incidental, but not the sum total of our ambition. Let your Council or "Amateur Radio" have your personal views, and if the necessary support is forthcoming the formation of such a section would be simple and its potential possibilities beyond conjecture.

Adding a P.A. to the Exciter Unit

By VK3ML, Tech. Editor.

It will be remembered that the previous issue described in detail a universal exciter and buffer amplifier for 80-40-20-10 metre operation. Since then many improvements have been made to the former unit and for 80, 40 and 20 metre outputs it is ideal. However, the 10 metre section seemed to be temperamental in operation. Too much depended upon the line voltage and, as the fluctuation around Malvern is from 180 to 230 volts and more the harmonic output of the exciter varied accordingly. Consequently, as the unit was on the "nose" all the time, it did not provide a reliable supply of R.F. Then again, there is no shadow of doubt

on 28mc gave the writer no small amount of practical experience in exciter building. Without exaggeration, the output was nearly trebled when the simple act of installing decent series feed R.F. chokes was brought about. It must be added that every form of standard regeneration in the doublers was tried with varying successes. In the end, it was decided that, as there was ample output on all the lower three bands to drive the 837, it would be far better to install a separate 28mc exciter stage which could be switched into the grid of the 837 at will.



that coil switches take power, especially on 28mc. The loss at this frequency because of necessarily long leads is high. It does not follow, of course, that such a unit with plug in coils and well laid out components will not give sufficient output on 28mc from a 3.5mc crystal.

The improvements made to the exciter generally were derived from the plate circuits. Originally no R.F. chokes were used in the HT leads to each of the plates. Being series fed, it was not considered necessary that they be used. However, after many hours of trying to squeeze that extra output

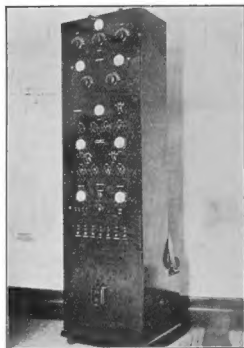
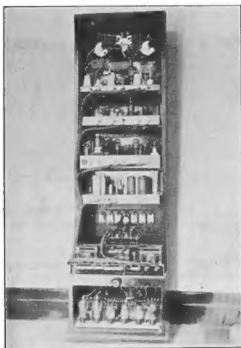
The idea demanded a little thought as to the type of circuit and tube would best fill the bill. The 6L6 tri-tet method had to be ruled out on account of the very high plate current that is necessary to run this harmonic oscillator. It was decided to try an 837 with suppressor grid regeneration in a tri-tet hook-up. Results obtained on the breadboard were highly satisfactory and the 28mc output from the 7mc crystal was ample to tickle the grid of the 837 buffer stage. The same circuit was tried using an 802 in place of the 837, and in comparison the 802 was a very poor performer. The special exciter was installed on the

original 53-53 chassis by simply altering the layout slightly to allow for the extra gear. Regeneration in the suppressor grid was obtained by means of a one-turn coil in series with the suppressor lead and coupled to the plate coil magnetically. The cold end was connected to earth in the usual way.

The power amplifier stage employs the screen grid QB2/75 tube, and is link-coupled to the buffer stage. Both the plate and grid coils are plug-in types and are far more serviceable than if switching had been used on account of the high-voltage-switch problem. To keep the P.A. stage in line

open" switches. This system also permits the use of the one aerial coil for all bands, when used in conjunction with a turns shorting arrangement for the 10 turn coil.

The power supplies are conventional and each has its own swinging choke in the input. This was decided upon for the sake of better regulation and increased life of the mercury vapour rectifiers. The filter condensers in the 550 and 350 volt units are of the electrolytic type and two of each are connected in series to avoid overloading. In order that the voltage across each will be evenly distributed a 100,000



with the coil-switched-driver stages a sufficiently large tank condenser was used so that any two neighbouring bands could be covered just by swinging the grid and plate condensers around. Fig. shows the general layout, the final amplifier, whilst Fig. is the circuit diagram. Care in design and construction is necessary in order to keep the high voltage where it belongs and all insulating values should be rated conservatively.

In order that the series-parallel change over in the aerial tuning coil may be simplified, three condensers were installed one .0005 mfd across the coil, and two .0001 mfd, in series with the feed line. Toggle switches are convenient to use as "short or

ohm resistor is shunted across each condenser. The use of two 83's in the 550 volt supply makes the use of 100 ohm resistors in the plate leads. This preserves the balance in the plate circuits and allows instant operation of the tubes on switching on the power. Although not shown in the diagram, pea lamp fuses are used in the centre tap of all the supplies. They are a cheap and highly efficient precaution against power supply blow-ups.

In regard to the arrangement of the transmitter in general, one can get a fairly good idea from the photos. The panels from the top are, firstly, the aerial tuning unit, next, the P.A. stage, followed by the buffer amplifier and the C.O. and FD panel, underneath

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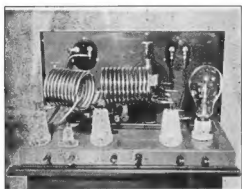
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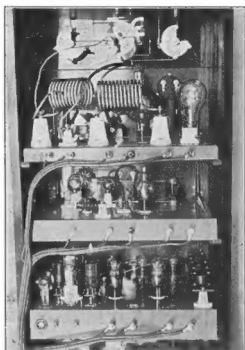
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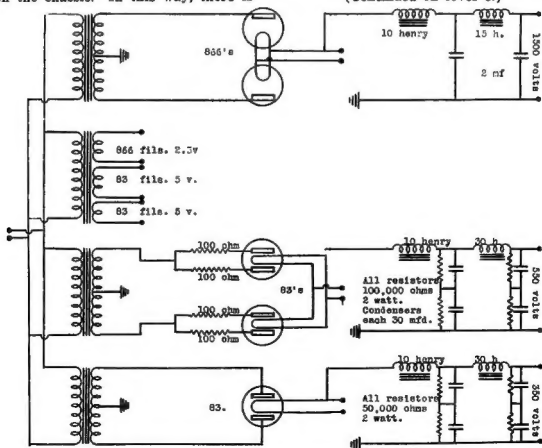


which is the modulator unit. The bottom panel constitutes the power supply switches and master mains control switch. Made of wood throughout, the frame stands 72 in. high with sides 12 in. across. The shelves are supported by wooden runners that take the weight off the frame and permit easy sliding of the chassis in and out for adjustment. All power cables are of the ignition cable type and run from the row of "Eddystone" midget stand off insulators at the rear of the shelf direct to the respective terminals on the chassis. In this way, there is



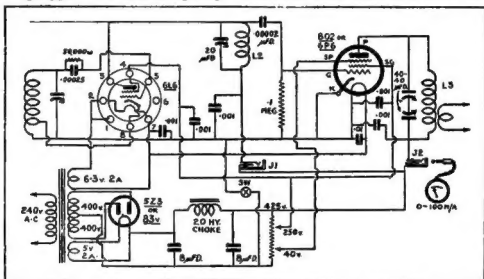
no chance of wrongly connecting a power wire up on returning any unit once it has been taken out.

(Continued on cover 3.)



Investigation of ultra-shorts is at a transitory stage, the chief aim being to design apparatus that will radiate stable signals. If a transmitter radiates an unsteady signal, even with high power, it is of little value for distant working compared with a much lower-powered steady signal. Amateurs with ideas beyond dabbling are "cleaning house" and putting the modulated oscillator and super-"squegger" on the scrapheap.

"drifts," the addition of an amplifier is of little value. Electron-coupled oscillators offer a solution, but normally there is little to be obtained in the way of R.F. output at 56mc. Then came the 6L6. This new metal valve, introduced by R.C.A. (and A.W.A. valve Co. in Australia), is much in the limelight as an exceptionally powerful audio type for little grid input. Naturally its R.F. capabilities are not overlooked in ama-



Since obtaining relatively good results over a radius of 100 miles or so around Sydney, the writer has to-day, crystal control or M.O.P.A. and receivers capable of receiving worked toward the development of better apparatus. The first consideration was to design a transmitter using crystal stabilisation. This is not difficult theoretically, but quite formidable practically. To gain a reasonable 56mc. output from a crystal exciter calls for a succession of stages. This does not suit the average amateur pocket. The ordinary M.O.P.A. arrangement has not been popular either, because stability is not compatible with an over-loaded oscillator. If the oscillator

teur radio. Experiments were undertaken by the writer to test its possibilities as an ultra-high-frequency generator, and the results were particularly satisfying.

The diagram shows the initial stages of a new five-metre transmitter now in use at VK2NO. In itself it comprises a useful low-powered modern transmitter. The 6L6 is used as an e.c. oscillator, with grid at 10 metres and plate at five metres. The R.F. output at five with only 350 volts on the plate is astonishing. It is about equal to the output obtainable with a 53 at 14mc., with a 7mc. crystal. The 6L6 thus provides a fine solution to the five-metre problem. Another 6L6 can be used as buffer, but it must be neutralised. Two aluminium plates

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$\frac{1}{2}$ -in. square about $\frac{1}{2}$ -in. apart will do the trick. In order to avoid the neutralisation business, other valves were considered. The 802 offered itself. Actually the valve used by the writer is the Raytheon RK25, similar in characteristics and behavior to the 802. A buffer stage was made up as in the diagram, capacity-coupled, and the output from this at 56mc. is enough to satisfy the most rabid "ham."

Those who are partial to the excellent 6P6-type valve should note that one of these could be used here, and, better still, two in push-pull. It will be obvious that here is the nucleus of an excellent five-metre 'phone rig. Suppressor modulation can be used nicely. The complete station now in use by the writer follows this exciter by two Eimac 35Ts in push pull, with 800 volts on the plates. The output is very considerable, yet, listening to the keyed signal on a monitor it is T8 and rock-steady. R.C.A. 801's would give excellent results in place of the 35Ts, which are not now obtainable under the tariff rulings. Note that in the 802 stage the rotors of the split stator 40-40mmfd. plate tuning condensers are not grounded. The condensers are used as a series-gap tuner.

Coil data are:—

- L1.—Eight turns of 12-gauge copper wire, 1-in. inside diameter, spaced slightly (tap at $1\frac{1}{2}$ turns from ground).
- L2.—Three turns of 12-gauge copper wire, $\frac{3}{4}$ -in. inside diameter, spaced $\frac{3}{16}$ inch between turns.
- L3.—Five turns of 12-gauge copper wire, $\frac{3}{4}$ -in. inside diameter, spaced $\frac{3}{8}$ in. between turns.

All other values are indicated. The high-power final in the writer's case is link-coupled to this exciter by a single turn loop at each end. The only difficult adjustment in the whole outfit is the cathode tap on the 6L6 oscillator coil. This will need to be juggled about until the oscillator works smoothly over the condenser range at around 60ma. At 350 volts on the plate of the 6L6 the oscillator screen should not exceed 250 volts.



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Does the Meter Move?

By Gil Miles, VK3KQ.

Some time ago the following question was asked at a key section meeting by one of the members:—

"Assuming that a simple field strength meter had been set up and adjusted so that the steady unmodulated carrier was indicated at a convenient value on the meter, should the meter move under modulation?"

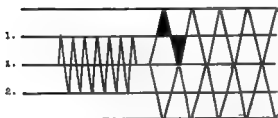
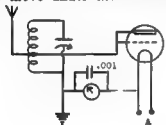


Fig 2.

Judging by the various answers I have heard from local as well as interstate hams, I think that the correct explanation might help to clear things. First of all, the answer to that question is—

NO! The meter should not move!

Fig. 1 is a diagram of a simple field strength meter and, if used properly, its linearity is all that can be desired.

Looking at the left-hand part of Fig. 2, with line X, Y representing the base line, the area between lines 1 and 2 represents the steady carrier. The meter will, of course, read the AVERAGE VALUE of this carrier.

The centre part, Fig. 2, shows the carrier modulated 100%, and notice now that a peak has been added above and a valley has been created below line 1 (shaded area); therefore, the nett result is the same; i.e., the value of line 1 has not altered so the meter remains steady.

Should the modulation become unsymmetrical (extreme right Fig. 2), usually, but not always caused by over modulation, the average value will increase and the meter will show an increase.

To qualify the foregoing remarks and also add further proof, look at Fig. 3, which shows a simple AVC system as employed on receivers.

"R" is the diode load resistor across which the necessary voltage is developed.

The rectified audio component is passed via C1 to the audio amplifier, and the bias voltage for the R.F. stages, after passing the R.F. filter composed of RFC and C2, is quite steady, not



New average

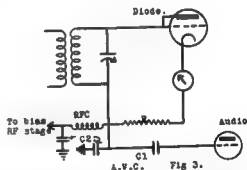


Fig 3.

withstanding the fact that it is a modulated carrier that has been tuned in on the receiver in the first place.

Now, it is easy to see why a controlled carrier transmitter and a receiver fitted with AVC will not agree.

Many transmitters are both frequency and amplitude modulated, and, in this case, if the tuning of the field strength meter is sharp, the meter will undoubtedly move under modulation. For this reason it is best to flatten the tuning of the meter slightly.

What is Your Power Output?

By "Steamboat Bill."

For those who are unable to obtain access to a voltmeter, there is nothing left but a rough estimate of the power input to the oscillator or the R.F. amplifier, and while this is not so serious for telegraphy, it is of the utmost importance for phone work. Unless we know what is happening in our power pack, we can have no idea of the operating conditions of our transmitter, so that it is impossible to adjust the outfit for a good signal by any other means than hit-and-miss methods, which do not, in general, leave the operator any wiser. How can we design our power pack so that the output voltage is anything like the voltage we expect to obtain? Here are the main items responsible for the output voltage value:—

1. Design of the power transformer.
2. Type of filter used.
3. Type of rectifier used.
4. D.C. resistance of chokes.
5. Load resistance.
6. Power transformer.

Starting at the winding, we should design the winding so that it covers as much of the core as possible. The wire used should be of such gauge that energy is not lost in heating the winding, i.e., the transformer should run cool.

The core should be carefully cut, so that when laminations are built up all joints are as good a fit as possible, so that there are no air gaps in its construction.

Each lamination, in addition to being adequately coated, should be free from rags round its edge. The secondary winding should be similar in design to the primary, i.e., with as large wire as possible, and over as much core as possible, and, in addition, as close as insulation will allow to the primary winding. The reason for all this is, that if the primary has high resistance energy is used up in producing heat, and this does no useful work in producing output volts, and so must be allowed for or

eliminated to such an extent that we can neglect it.

If the winding covers the whole core, as in a ring transformer, very little energy is lost in stray fields, which do no good, and quite a lot of harm.

A badly built core permits magnetic leakage, and so these losses must be eliminated or allowed for.

There is also energy used up in producing currents in the core material itself, and these become very formidable unless the laminations are thin and properly insulated from one another. All these losses detract from the energy we are going to obtain from the secondary winding.

The secondary also must have low resistance, as has the primary, or it will use up quite a large voltage to drive the current through the winding, so there would be still a further drop in output voltage. Note that we are discussing the transformer working under load. These are major points of loss, and there are many others, but I think we have gone far enough, and if we take all the precautions above, then allow 10% drop in the output voltage that would be indicated by the turns ratio, we will be very near the actual conditions.

2. Where an ordinary filter is used, consisting of two condensers and choke, and where the first condenser is 2 MFD or over, we are going to drop such voltage in the choke as is necessary to overcome its resistance in addition to the A.C. component, which we shall neglect for the purpose of this article. If the resistance of the choke is high, this voltage drop is also very high; for instance, a 1000-ohm choke passing 30 M.A. drops 30 volts, so the more iron in the choke, and the less and bigger the gauge of wire the better.

3. So much for our transformer. As for the rectifier, if the new mercury vapor tubes are used, we can deduct a further 15 volts from the output, and then forget about it. Another way of helping is to have large condensers and a low value choke, but as this combination is liable to become dangerous for our rectifier it is not recommended for the beginner.

For filters using an input choke, we have a different state of affairs, for all current in the first choke is pulsating, and so cannot be allowed for by the d.c. resistance; it is mainly a matter of inductance, and as this is to be a very elementary paper, we will not enter into a discussion of its effect. However, if it is a value specified by the handbook, it will be quite in order!

If your load resistance is low, we are draining a large current through the transformer windings, rectifiers and chokes, and so the greater the current the lower the value of their resistance should be, to prevent a drop in voltage across them.

Actually, we have arrived at the requirements of good regulation, by trying to get an idea of the conditions governing the amount of voltage that is being lost in the parts of our pack.

Station Description

VK2QE

Owned and operated by A. A. Fritz, Albury, has been in operation since July, 1934, low power S.E. rigs were used for over 12 months, working all VK's and ZL with under 5 watts to 45 osc. MOPA also used on low power. DX was impossible, so in October, 1935, a PP45 osc. was built, and in ten months with 25 watts input using full wave Zepp, 38 countries were worked. Alterations were again started a few weeks ago and a new rig is in course of construction which, when finished, will consist of 59 EC. 210 buffer 801 final. As a standby 2QE at present using PP45 link coupled to 210 PA and has during last few weeks added 6 new countries, including LU9 for WAC, making total 44 countries. The QRM problem is bad here in Albury, as out of the 6 hams 4 are active and 3 on 20 MX, where this station is permanently situated. Have one station only 100 yards away, and he also a Dx fiend like myself, and rx here is only a 6C6 det., 37 audio.

BERU CONTESTS, 1937.

FUNNY, BUT TRUE!

Prof. A. Goetz, California Institute of Technology, immersing a 30-foot coil of wire in liquid helium and that the wire lost all traces of electrical resistance and became superconducting while so immersed. 3RX has been thinking how he can fit a tank of it in his transmitter to keep his plate coil efficiency high!

K. G. Jansky, of the Bell Telephone Labs., has discovered a new kind of cosmic ray static that apparently originates in the Milky Way. Please note that if you are erecting a vertical antenna, that you shouldn't point it that way.

In 1620 the Pilgrim Fathers landed on Plymouth Rock. During the last VK-ZL test many hams wished, when W stations answered a "CQ Europe," that the Plymouth Rock had landed on the Pilgrim Fathers!

VK3EG has entry forms for the BERU contests which extend from February 6th—1900 GMT to February 7th 1900 GMT, and between same times February 13th to 14th. This covers the period of the Senior Contest. The Junior Contest extends from 2100 GMT, February 20th, to same time February 21st, and will be continued on February 27th 2100 GMT to same time on 28th. Power limits are for the Senior Contest, 250 watts; for the Junior Contest 25 watts.

All Entry Forms must be posted within 14 days of the close of the contests. All entrants who are not members of the R.S.G.B. must certify in the declaration on the entry form that they were fully paid-up members of their local BERU Affiliated Society at the time of the contests.

Your local representative has entry forms, or write to VK3EG, Box 41, Tallangatta, Vic.

Correspondence

To the Editor, "Amateur Radio."

VK4DO, "Hobfren."

202 Campbell Street, Rockhampton,

16th October, 1936.

Dear Sir,—On the 9th October, with an input of 40 watts to a 210 in the final amplifier, I worked all continents in 50 minutes operating in six successive QSOs. Immediately following this, and in another 22 minutes, I worked three continents (W6NEP in North America, OH8NK in Finland and VS1AH in Asia).

I am endeavouring to check up per "QST" and American "Radio" to see if this is anywhere near a record, and would like to know if any member in Australia has bettered this time.

On 27th September last WAC was made in 105 minutes, six continents being worked on CW and two on fone in this time. All contacts were made on the 14mc. band.

Yours faithfully,
Harold L. Hobler, VK4DO.

We are indebted to VK2MM and "Break-In" for the following information:—

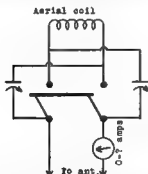
Jimmy Parsons, of Ormond, New Zealand, has been paralyzed for 15 years, and has been totally blind for 10 years. Through the co-operation of several ZL hams, the N.Z.A. R.T. and the Post and Telegraph Department, a special 'Phone licence has been issued to Jimmy with the call sign ZL2JO.

The transmitter is a three stage, crystal controlled rig, and operates on 3,700 KC. Telefunken modulation is used and the input is 20 watts. The complete transmitter is housed in a sealed cabinet, the only external controls being the power and microphone switches, which are operated by his parents.

With a full knowledge of the circumstances we feel sure that VK amateurs will do their best to avoid causing QRM on 3,700 KC., and will join with "Amateur Radio" in wishing ZL2JO the best of luck with his station.

Series-Parallel Switch for the Zepp.

The bugbear of changing the condensers tuning Zepp feeders over from series to parallel can be overcome by



the simple use of a D.P.S.T. knife switch as shown in the circuit. When the switch is in the open position the

condensers are in series with the feeders, whilst, with the switch closed, the parallel connection is arrived at. It will be noticed that in the latter position both condensers are shunted across the coil. This may be advantageous when the scheme is used to tune to 80 metres as well.

CONTRIBUTIONS WANTED.

Features of any description are required by the magazine committee for forthcoming issues. Technical articles, station descriptions, experimenters section notes, or stories (no Audrey's or knock-knocks by request), should be sent to the Secretary. Thanks, gang.

28 and 56 M.C. Notes

By E. H. Conklin, W9FM

By the date this is written, September 22, conditions on ten metres have staged a complete recovery to the point where all continents have been coming through in the U.S.A. One of our most faithful reporters, J. J. Michaels, of W3FAR, mentions that FA8BG and G5FV were heard on September 8 for the first European and Northern African of the season. The time was early afternoon until 2.30 p.m. Similar conditions continued up to September 17 when gobs of Europeans were heard and worked. Some of the 28mc. stations were VP2AT, K5AY, NY2AE, 11TKN, K6MVB, K4DDH, OZ3J, HB9AO, OK1AW, and numerous French, German and South American stations.

Frank South, W3AIR, around the first of September heard many VK, HJ, PY, LU, CO, VP6, HH and HI stations. 11KN was the first European, coming through on about 28,300kc. on the 10th.

VE3DU reported on the first before much of the dx was coming through, but remarked about the number of good W6 signals.

W6ITH says that he has listened all summer, hearing locals, K6MVB, and a few weak W4's. The band opened on September 12 for all eastern districts except 1, 2 and 3, but the W2XAM police transmitter on 30.1 came through. Many 'phone QSO's were made in the following week, on a rig that sounds like a ham's paradise; a pair of 500T's in the final, plate modulated, 1 k.w. input on 28mc!

W6QG sends us a very interesting daily log of west coast conditions since mid-July. Central and South Americans, several W4's and a few, W2, K6, W7 and W8 were heard up to August 1 when the first VK came in. HK3JB (former HJ3AJH) then reported poor conditions, having heard the first VK since June. Aussies and eastern

stations filled the log in August. VK3BD reported to him that the station would be closed, to be reopened as a VK2. JNJ harmonic came through on 27.9mc. on September 13. On that day, W4AJY advised of working ZU1SE, G6DH, ZE1PJ, ZE1JU, CN8MQ (using single 800 in final). Aussies, South Americans and strong eastern W stations—calling Europeans—continued up to the 20th, but no Europeans reached W6QG. More J commercial harmonics were heard on the afternoon of the 18th, but J2CE came in on the 19th at 6.35 p.m. Pacific time (first J since April), without any commercial harmonics being audible.

A. W. Alliston, G5LA, gives us the British picture as of the end of August. W4AJY was heard on August 20, W1AVV on the 22nd, by G6DH. VK4EI came through on the 19th, VK3JB on the 22nd, indicating conditions quite similar to those in the U.S.A. SU1KG, CN8MQ, PY2CJ and 11KN are among calls heard in England. ZS1H was heard on numerous days during August, reporting renewed W contacts, pointing out that VK and South American contacts were a daily occurrence in South Africa.

An odd observation was made on September 18 by W3FAR. During the evening the band was full of W6 'phones, but not a single code station was found!

We notice that the Europeans have been coming through later than last year when they started to come through, peak strength occurring at 1 p.m., or later, Eastern time. This may happen earlier in December and January, but suggests that 28mc. is not the highest frequency that could have been used to get across the Atlantic. The British continue to listen for U.S.A. signals on straight or modulated c.w. on 56mc. so give them a call

when conditions to Europe are good on 28mc.

There have been practically no really dead ten-metre days in September. G6DH reported only two dead ones in August. Dust off your coils and come on down!

W3EIC hears many VK's on both 80 and 10 MX Bands and is very anxious that Aussies look out for him on these wave lengths.

(By A. Pritchard, VK3CP.)

Most of the local chaps were away at Christmas, and the band was naturally very dead—hi. Although condx have been bad for all contin, there is a steady improvement with many W stns. on during the mornings. Several are on CW again, as the phone carriers are weak off peak periods—K6MVV about 2.30 p.m., and J2IN best J at 5.30 p.m. W1TW and VE4JV are good at 8 a.m. W4CYU is building a Rhombic antenna for his Aust. beam. Other consistent CW Yanks are W6DUC, W6MYS, W6KFK, W6KIP, W3PC, W3FQM. W6KIP has an extra stage on 5MX with 375 watts input in CW, also XE1AY is CC on 5MX, CW. VK's, BQ, YP, CP, and 2GU have CC finals on 5MX. The best phones are W8MWL and W6ERT. The first has 1KW input, but 6ERT with and 800 with 150 W input, and Class B 210 mod. is by far the best. It is several weeks since the Europeans have been heard at the usual

time, i.e., 7 p.m. They are getting through at about midnight; VK3XP qso'd YU7GL, and hrd. F8QW on 10th Jan. On the 15th Dec. 3YP wkd FM8AA from the West Indies; we hrd him for several nights afterwards, but couldn't raise him. He is on during our mornings qso W's, but inaudible this end.

The Johnson Q feed system has been in operation hr at 3CP since May last, and has been most satisfactory. At 3BQ with 3YP 2nd op. hi; the system was put thru its paces, using 11/16 in. brass tubes. In 3 BQ's large passage way the boys found the system sure fire, with calculated measurements vy close to experimental results; standing waves were completely absent from the main feeder—3BQ has the tubes connected to his European beam. At 3YP Patto is changing over his stubb feed also. VK3XP is adding the Q system to his rotary beam. An added advantage is that there is no shorting bar to worry about if using the ant. on another freq., keeping peaked effc on 10MX. The South Africans so far during their contest are very scarce. ZS1H was last hrd on 20th Dec., with a heavy echo. VK2GU is back on the air again after a holiday in Melbourne; 2GU has an Eimac 50T in the final—Class B mod by a pair of 801's. The harmonic of TDC we hr so often is the 2nd; fundamental is on 13985 KC, giving 27970 KC, a nice marker. TDC is situated in Manchuria—72.

Hams!

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R.A.A.F. Wireless Reserve Notes

Officer Commanding: Flying Officer R. H. Cunningham, 397 High Street, Glen Iris, S.E.6, Victoria (VK3ML).

District Commanders—

Second District, N.S.W.—A. G. Henry, Clareville Avenue, Sandringham (VK2ZK).
(VK6MN).

Seventh District, Tasmania—R. Cannon, Goldie Street, Wynyard (VK7RC).

Third District, Victoria—Pilot Officer V. E. Marshall, 3 Myrtle Avenue, Kew (VK3UK).

Fourth District, Queensland—A. E. Walz, Sandgate Road, Nundah (VK4AW).

Fifth District, South Australia—F. M. Gray, 52 Ormond Grove, Toorak Gardens (VK5SU).

Sixth District, West Australia—S. J. Madden, Dundas Road, Maylands

R.A.A.F. RESERVE NOTES.

The 12 Demons that attended the recent pageant at Parafield turned on a good show from all accounts, and the radio work was particularly outstanding. Although little work was done with the aircraft, reserve members were able to keep watches and see that no one got lost.

It was most unfortunate that the Reserve was unable to co-operate in the Brisbane-Adelaide air race in December, as no one had more earnestly looked forward to providing a bit of co-operation than the members themselves. However, the whole matter had to be washed out because of the present position of Civil aviation and Federal control. If the case had been decided upon a week or two later then members would have been able to carry out the plans that had been made. It is a great pity the show was missed, more especially since every checking in point could have been catered for by a portable station.

The other disappointment that came about was the resignation of 6Z1-VK6MN as District Commander for West Aust. This had to be done, as it was explained, because of business reasons. However, 6Z1 has not left the Reserve, but is an active Section Leader, whilst his former deputy, 6A2-VK6LJ, takes over the command. Jack has had a great deal of experience in organisation, and will be a fitting successor to Syd.

It is expected that an announcement will be made next month with regard to the reorganisation of the Reserve along the lines of the Citizen Air Force, and the calling for new enrolments. In the meantime, things seem to have been quiet in all districts, pending this change. However, Federal watches will be commenced again early in February, and once more a year full of activity is expected.

3rd District Notes.

(VK3UK—3Z1.)

January is always a month in which the work of ordinary schedules is broken into. So many members are away over the Christmas-New Year period, and so many others take their holidays later in the month, that it is usually the end of the month before normal routine settles in again. There is also, through the somewhat scratchy schedules, a paucity of news.

Most of the sections have settled down already to the re-shuffle of personnel mentioned last month, and although it is early to realise fully the advantages of section members being relatively close together on days of poor conditions, already the advantages are obvious in many other ways. The scheme is particularly suitable for the metropolitan members, and their sections already reflect the value of the change over.

Requests for details of the requirements of Reserve members continue to come in as frequently as last year,

but the difficulty is that we cannot take any more members under our existing organisation. Plans are in mind for altering the strength of sections and the method of section control in order that our district strength can be increased. However, our policy always has been quality rather than quantity, and in any expansion scheme our new members will be as carefully chosen as in the past.

We have to welcome two new members this month in 3UO and 3YR. Both are keen and enthusiastic, and should pull their weight 100% in the sections to which they will ultimately be allotted after they have completed their training course.

3Bi made a rush trip to Melbourne last week-end, and we had the pleasure of seeing him for a few minutes.

3D4 is busy rebuilding his gear after his fire.

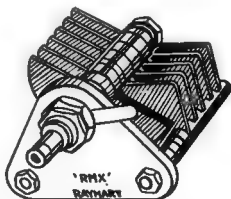
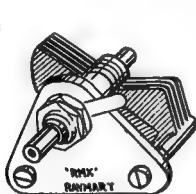
3D6 has been away on holidays with 56mc gear.

3E1 is down in Melbourne for a couple of weeks.

3E2 has taken up yachting, and seems to know as much now about luffing and tacking as he does about buffers and RK20's.

3E4 has been promised AC for over three years, but is still waiting.

3Z1 is busy preparing for the move to his new QRA (note address—75 Argyle Road, Kew, E.4). An excellent example of the value of the 3.5mc band for portable work was shown when his masts were pulled down. The antenna was draped along the fence with the feeders just off the ground, and there was no noticeable difference in signal strength throughout Victoria. What a boon, when using a portable, to know height is not a prime factor for reasonable distances! Of course, theory bears this out.



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Divisional Notes

N.S.W. Division

W. G. Ryan, Secretary, VK2TI, Box 1731JJ, G.P.O., Sydney.

COUNTRY ZONE OFFICERS.

ZONE 1 (Far West)—
J. Percos, VK2PE, Hope Street, Bourke.

ZONE 2 (North-West)—
H. Euton, VK2HV, Byron Street, Inverell.

ZONE 3 (North Coast)—
R. J. Lerry, VK2NY, 54 Bacon Street, Carlton.

ZONE 4 (Hunter River and Coalfields)—
S. Grimmer, VK2ZW, 161 Tudor Street, Hamilton.

ZONE 5 (South Coast and South West)

W.I.A. AMATEUR AND SHORT WAVE RADIO EXHIBITION, 1937.

The N.S.W. Division Council decided to repeat their successful Amateur and Short Wave Radio Exhibition in May, 1937.

The exhibition to run during the week dated from May 3rd to May 8th.

This exhibition was a tremendous boost to Amateurs in N.S.W., and did quite a lot to consolidate their position.

The show will be on similar lines to the one last year, and Amateurs are invited at this stage to prepare gear with a view to competing for the substantial prizes that will be available for competition.

The following were the committee elected to look after affairs:—President and Club Stall Representative, VK2HP H. Peterson, Working Exhibits VK2TI W. G. Ryan, Trade Exhibits and Advertising, D. B. Knock VK2NO, and J. Moyle VK2JU, Lectures. P. Adams VK2JX, Treasurer. F. M. Goyen VK2UX, and Secretary W. M. Moore, VK2HZ.

The location has not as yet been decided as the committee feel a larger hall is necessary.

All the Amateurs in N.S.W. will again be circularised when the final prize list and associated information is available.

Don't forget it, gang; we want your support, and anyway, everyone has a jolly good chance of landing a prize. See all the details in the March issue of Amateur Radio.

ANNUAL ELECTIONS.

The Annual Elections of officers for the N.S.W. Division takes place at the end of February, and members are reminded that it is their responsibility to select the best available talent.

The election in N.S.W. is of an extremely democratic nature, insofar that every member, including country ones, has a voice in the electing of the officers for the ensuing year.

From time to time one hears a moan that so and so is that, and so and so is this, but don't forget the so and so was elected by the members and it is their responsibility to see suitable men are elected. So before voting, give the matter your undivided attention so as to get the right man in for the job.

N.S.W. DIVISION, 1936.

1936 proved to be an extremely successful year for the N.S.W. Division, and the Institutes activities were at a peak. The Council wishes to thank all those that helped them, and they can only hope that the support afforded them last year will be repeated this year.

ZONE NOTES.

Condx here rottener than rotten fer DX tho locals heard on all bands at all times few Europeans on 40 but no contacts HPIAA hrd on 20.

20J keeping Sunday skeds on 40 but qrl thru the week.

QE qso'd CR9AA but hard to raise Europe. Usually weak reports from there.

EU is going to remodel, using gear from QD.

AP hrd quite a bit from new qra. IG getting out well nowhere! Trying to get time to build new recvr.

To every one the chaps in this Zone extend their very best wishes for 1937, and particularly to our W.I.A. officials who have co-operated and helped us in the last year. This doesn't forget good old 2YC QSL officer N.S.W.

Ultra High Frequency Section, VK2VN.

In spite of the Christmas holidays, enthusiasm shown has been quite good during the past month, there being some twenty-five (25) stations operating in the five (5) meter band.

Our old friend 2BP in Hazelbrook has staged a comeback to 5mx and was heard qso 2NO the other night. Incidentally the distance between these two stations is about thirty (30) miles, but 2BP is up in the mountains. On January 24th some of the gang are going up to Lisarow, about fifty (50) miles from VIS northwards, where there is a mountain about 800 feet high from the top of which can be seen Sydney Harbour Bridge. A portable is to be taken using various beams, and it hoped that both Sydney and Newcastle will be contacted.

The writer has just returned from a motor trip to Brisbane where contact was made with the ultra high gang up there.

The boys there are doing good work at the Kingston Speedway, which is a 10-mile course about 2 miles across. By means of a portable, the position of the riders at a distant point is reported back to the starting post. Congrats, VIB!

2HL will shortly be holidaying with a 5mx portable at Ettalong, about 45 miles from Sydney, and on a recent test found that VIS stations could be contacted quite easily.

With regard to 28mc, conditions have shown a very bad falling off, and Europeans have been conspicuous by their absence. The Yanks are not nearly as loud as they were six (6) weeks ago; however, with ten (10) one never can tell. On the other hand the J's have been quite solid during the day.

From the last issue we note with the greatest of pleasure that an U.H.F. section has been formed in South Australia — may we wish you the very best of luck and dx.

It is suggested that 5mx stations give their call sign more frequently as quite often signals are audible for the duration of a minute or so only.

In concluding, may we extend our rather belated best wishes to all for 1937?

NORTH SHORE ZONE.

2ACJ has now changed his call to 2CB.

2BJ worked his first yank.

2LQ, who was 2DU, then 2IH, and has finally come to rest, does much rag-chewing on 5 metres with 2HL who lives down there. 2AET is a newcomer to the Ham ranks and has a qra in Wollstonecraft among the boys around. His rig is crystal controlled, and can be heard regularly on 40mx. 2FV is expecting to be on some time this year, when he has his super working. Just at present he is scratching around for a qra and has been in half a dozen in the past month. 2HA has now completed his rig which stands 6ft. high with an aluminium panel sprayed with black duco. 2HO has started to arouse interest around the Roseville Hams, working dx on 20. 2HZ's new transmitter is going to be interesting with plenty Hammarlund products scattered about. 2IP is heard on 20MX fone calling CQdx. 2ABK, whose signal sounds close at hand, works Yls in Chile. 2WW is also on again. 2LZ has 53/53 excited with series link feed, but don't know if it's using a xtal. 2NN has built a super using pair of 6L6's in the last stage with twin speakers.

2QF's Newport phone was heard R3 at Cotter River, F.C.T., on Xmas holidays when 2GV, 2VL, 2VG were down there with portable gear. 2SS is working dx on 20mx. 2YA is thinking of putting in a new xmitter. 2YC had quite a party at his qra the other month with 2HZ, 4EI, 2QL, 2GS and several others.

THE NORTH SUBURBAN RADIO CLUB.

Brown Street, Chatswood—VK2ADF.

(Affiliated with W.I.A.).

The Club continues to be a source of interest to its members, who have made excellent progress in morse code and theory during the past six months.

One member, Mr. Bob. Ackland, sat for his A.O.P.C. in January, and it is almost certain that the Ham list will benefit by one more this month.

Three members, VK2NN, VK2GV and VK2VG will compete for the R.I.'s Trophy, and expect to attend the first heats on 19th January.

Three-letter calls are apparently not popular around this district, as another

member has now taken the opportunity of changing his call to a double-letter one. He was VK2ACJ and will now be known as VK2CB. The other member was VK2ACL, who changed his call to VK2GV.

The Club transmitter will shortly be operating on telephony in order to give members news of club activities. VK2NN is responsible for the modulation system, and the work and time put on the rig is greatly appreciated by his fellow members.

LAKEEMBA RADIO CLUB—VK2LR. (Affiliated with the W.I.A.)

By 2DL.

A new system, introduced by 2JT, has been adopted for the delivery of regular lectures, various members being asked to lecture on some particular subject at each meeting. Points will be awarded by the adjudicators, 2CL and 2IC, and at the end of six months a prize will be given to the member whose lecture gained the most points.

In connection with the Radio Inspector's Trophy for Code, ten members have expressed their intention of entering for the contest.

It is anticipated that the Hurlstone Park-Canterbury "5 mx network" will be in operation in the near future, when there should be at least four 5 mx stations within half-a-mile radius. Under these conditions stability in transmitters is essential, and electron coupling will be quite popular. The use of 6P6's in electron coupled push pull by 20D, and 6L6's by 2DL, obviates the necessity of multi stage c.c. rigs, at the same time affording stability which closely approaches crystal, when correctly adjusted.

2QX has once again returned to 40 mx after a long absence experimenting on 5 mx. 2XM, who was recently transferred to Cairns, has been heard on 40 under the new call of 4XM. Social News reports that our President, 2ZR, was recently presented with a junior op., also 2QP has another addition. The engagement is announced from Brisbane of our former Secretary, 2XZ, to Miss Bacon, of Taringa, Brisbane.

NEWCASTLE NOTES. 2RF.

Congrats. to new hams AES, and AEZ and AFA. Good hunting, boys. ZW has AT xtal, and his 852 perking in final. Clicked a CM on 20 mx. BZ has gr'd mod. fone, and is often heard on 20 mx after DX fone. The annual Club Xmas Party was the best yet, and many OT's, such as CS, MS, and XQ, were present. ZC still pushing out fb fone on BC band. RF looking for bugs in his Class B modn. on same band; music fb on high frq., but distorting on BC frequencies. KB has new rig and rx, so keep a lookout, boys.

Victorian Division

Council Jottings.

The January meeting was held at Law Court Chambers on the 12th. Half way through the sitting the members had the pleasure of being introduced to the four visiting American hams in the persons of Albert Fox, W6GNV, Geo. Brownell, W6KEE, Frank Torchia, W6KEK, and Paul Harper, W6KMS. These lads are the operators on the U.S. training ship, California State. The council moved that the honour of Honorary Life Membership be bestowed on the visitors. It is interesting to note that the last W ham to visit us was Fred. Schnell, W9UZ, who came out with the American fleet in 1926. The reception committee helped to show the gang over Melbourne and country, as well as arranged for shack visits.

Mr. G. T. Thompson, the council chairman, was appointed the Victorian delegate to the Federal Convention in Sydney.

Almost the entire evening was taken up, outside general business, by discussion of items on the agenda paper.

Designs were approved for the Gadsden Trophy, and Messrs. Woodward and Davies were instructed to order same to be completed.

Messrs. Ivor Morgan and Gil Miles have been compelled, for business reasons, to leave Melbourne, and their resignations from the council were received with sincere regret.

The council wishes them the very best in their new spheres of activity.

Accounts for this month's operations approximated £40.

VICTORIAN KEY SECTION NOTES. VK3DP.

Though some members were still on holidays, the first meeting of the Key Section was well attended. Amongst those present were Miss Ruth Longley, VK6YL and 3EO, ex-2EO, who is now stationed at Flinders Naval Base. 6YL, who is a member of the W.A. Ladies' Cricket Team, continued her journey from VK5 to visit this State.

Plans were made to meet the four W6 hams who are to be in Melbourne for a few days. 6YL and the W6's will be well entertained during their stay in Melbourne.

By the time these notes are out the B.E.R.U. Contest will be in full swing. Log forms may be had on application to 3OC.

There will be an auction sale of junk gear, etc., at the next Key gear you do not want and make your fortune. It is rumoured that 3MR has several punk 852's to dispose of.

Condx generally have been very poor of late. Still some QRM on 7M/c. 14M/c very quiet. It appears that the Key Section are the only section.

An extraordinary meeting of the combined sections was held on the Short Wave Group meeting, and he the W6 hams. The attendance was fairly good. The chair was taken by Mr. Thomson at the close of the Short Wave Group night to welcome introduced the boys to the members. 6YL was also present. The W6 hams were presented with Life Membership Certificates of the Institute (Vic. Div.). Various items of interest to members were discussed, and the attitude of the American ham to high power was a subject fully dealt with. Our visitors were very definitely against very high power, the general opinion being that 50 to 100 watts was ample for all amateur requirements. The close of the meeting was a signal for the members to cluster round the W's, who were submerged under a barrage of questions. An invitation was extended to the members to visit the "California State," berthed at Princess Pier, so

that those fortunate enough to go there could see the gear.

VK3KP.—Local executioner tried to bump 3UO off with new stick that wouldn't stay put.

VK3IW.—Now with an RK20—a measure of retaliation against the growing QRM.

VK3CB.—40-metre activities quiet for months of December and January, holiday season. 200-metre trouble.

3PA.—Giving 29/Mc a try after being off that band for five years. Also on 14M/c, and active on 200-metre lone band.

3UX.—At last finished final stage wid 210, and landed first DX, G2PU, and K6KLL. Hi!

3RI.—On 40 metres again, and will soon have lone going. Now have another A.O.P.C. in 3XW. This totals eight hams in our Club now.

3RT.—A junior op. has arrived, but it is not anticipated that he will cause any radio QRM for a while.

3BQ.—Got tired of using 28M/c only, so carried out tests with "Q" matching section compared to "stub," and found the former the more efficient. Now using "Q" section on Yank beam, and find it draws quite well on both twenty metres as a doublet, and on 56M/c. as a double zepp.

3UK.—Will soon be moving to new QRA.

VICTORIAN DIVISION 'PHONE SECTION NOTES.

The last meeting of the 'Phone Section we held on Tuesday, 24th November, 1936, at the Institute Rooms, Queen Street, Melbourne, and there was a fair attendance of the gang, including about 20 transmitters, also Mr. Laniff, of the Allocations Committee, and numerous other non-transmitting members. The minutes of the previous meeting were moved by 3DH, and seconded by 3GY, and carried unanimously.

3CR and 3GK did not require Sunday allocations, but 3GK accepted a week-night allocation. The allocations were for two months, as there was not to be any meeting of the section during December, owing to the Xmas holidays. These notes were held over also for the February issue.

3DH moved at the November meeting that, as there was no other meet-

ing till the end of January, that the allocations be for two months. This was seconded by 3KE, and carried unanimously. After the allocations and the crystals were given out the meeting closed at 10.30 p.m.

During the holidays the Secretary made a tour of Western Victoria, and had a look at some of the country stations, including 3BA, Ballarat, 3LK, Lubeck, 3WV, the new regional station at Doon, and 3RH, Glenorchy. He writes, while sending his 73 to the gang for 1937:—

"Mr. and Mrs. Hodder gave their usual wonderful hospitality during our stay of two or three days with them, and Ivan also had the pleasure of towing us out after we finally became totally bogged on the road about two miles from his place. We had been bogged twice before this, but just managed to get out of it. We had a heavy downpour of rain one morning, which caused the road to get just sticky enough to let the wheels of the car go round without taking us along, and we certainly did some skewing and sliding and side-slipping before we finally did a broadside and blocked the road, completely bogged!"
Nice work, Jack!

SHORT WAVE GROUP NOTES.

By O. E. Davies.

The Group held a meeting on 23rd December, at which all thoroughly enjoyed themselves. 3JO brought in his 5 mx receiver, and managed to qso several stations, using the Group's xmitter. The gang also brought in a lot of refreshments, and an F.B. feast followed.

At the meeting on 13th January we had the pleasure of entertaining four W6 hams, whose ship, "California State," was in port. As a number of members from other sections came up to welcome our visitors, the meeting was turned over to 3TH (Chairman of Council), who conducted it as a general meeting of the Vic. Div. Those who could not attend the meeting missed an F.B. evening, as our visitors gave us some first-hand information on ham doings in U.S.A.

The Council have asked the Group to construct a communication receiver for use at 3WI.

Preliminary discussion on circuits, lay-out, etc., will take place at the next meeting, and at the following meeting, 10th February, it is hoped to commence construction. Any information on S.W. Super-hets would be gladly welcomed at the Group meeting, so come up and let us hear your ideas. 3JO—Still working steadily on 5 metres. 3MQ—QRL night work at present. 3RQ—Intends to get down on 5 mx now. 3JH—Is still as silent as ever. 3XJ—Qrl hard work and YL? 3KP—A new ham; building 6-tube super. 3UO—Not quite so new; suffers QRM Diathermy apparatus. Rest of the gang threaten to get A.O.P.C.'s any day now.

The scribe sends best wishes for a prosperous New Year, and hopes to see you all at the future meetings of the Group.

MALLEE AND NORTHERN DISTRICT.

(3ZK.....3HX.)

Conditions have been fairly good, considering the season, in this part of the State. On 14mc the dx is coming through, particularly some very fine fone. 7mc is, as usual, a QRM mixture in the early part of the evening, but later any amount of DX can be heard, and in the early morning DX fone comes through on that band. 3.5mc is very patchy, on account of the conditions, but nevertheless some stations are using it. Plenty of ZL's are to be heard and worked.

3CE.—With the harvest finished, Roy has a little more time for radio, and is concentrating on 20mx DX.

3KR.—Is mostly on 20 and 10, and is daily adding to his list. On Sked Sunday mornings, and has been heard on 40mx.

3TL.—Treb has been away on holidays.

3OR.—Has at last decided to rebuild the rig. Believe Murray intends to build one for high frequencies and another for 80 metres.

3KI.—The radio bug is at work, and Jack is talking Diamond Antennae, etc.

3WN.—Took a portable away on holidays over Xmas.

3IH.—On 40mx, a t9 sig with a 6A6 exciter, link coupled to a 6P6.

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3EP.—Hasn't been heard much since the holidays, but think that Ted is building the new xmitter he has promised himself.

3TS.—Tom Speer heard on 40mx cw with a very nice note.

3GD.—Also on 40mx; nice note.

3BG.—On 40mx with a rough note, but possibly Roth will step out with something special in the way of rigs soon.

3ZK.—Spends his time on 40mx and 80mx. Jim is contemplating a few changes in the rig, so as he can get to 20mx with a little bit of power.

3HX.—Confesses that he worked a little DX getting RST589x from KA1. Has a pirate using his call on 20mx. Some fun when Tom gets down himself!

Queensland Division

Things have been reshuffled in this fair State of VK4. The old mill is to be tried once again on her spelling, and it seems that the old horse again sniffs the battle. In this, my first attempt on the Inky Way in these fair pages, I have been set to follow a standard that has been rigorously held by my predecessor, 4AP. Let not it be inferred that AP is divorced from the etheric excursions. Far from it. He resigned from the Council. Others did likewise at a meeting held in Brisbane lately, and new men are taking over. Ergo, me for the rendition.

Main topic in the mouths of CQ has been the new PKG reg. anent gargling and gramo-grinding. Hoots, mon, 'tis fine sauce. The curb rein has been placed upon some, the GA OM invites others. At the risk of starting a private war, I make bold to endorse the meaty portions of the epistle from J. M. I have long maintained that the best way to lose social prestige is to become publicly intoxicated, be it with the wine when new, power, or pride of possession. A concern without discipline becomes a rabble, and if most of the squawking I have heard these last few years is justified by the W/T Act and regs. I'm open to conviction.

Great will be the tribulation amongst the BCL's when the gang fire up their fones on 3500KC. Said

BCL'S will be peeved because they will, in the main, be unable to hear the conversations on their dual—(pardon)—wave sets, and will be listening up to the multitudinous spots that will occur on their "brand-catchers." The outcome? El-e-men-tary, my dear Watson, EL-E-mentary.

Feverish activity on 56MC. What with AP with a 40-metre shivery slab doubled down and down and down, AW and GK on his "hammer," and all with their Simple Simons all hotted up as 56MC superhets., there should be some good work done in the trans-Tasman attempts. And to listen up on 20 and 10 on KH's receiver! Going back home to the three-tube e.c.r.x. is almost as sacrilegious as going to the Barrier Reef with Z. Grey, and only taking bent pins and cotton as tackle. There's BY specialising on 56MC portable equipment; WT scrapping his bread-board layout in favour of the new love, a rack and panel outfit. JL, engineer of the M/Y Sweetheart, has her fitted with remote control: has her with a tritet on 3555KC, and laying down copy in W6 and 7. She's entirely driven from her batteries. Have heard him on fone with 4EL. A 42 satisfactorily modulates the last tube, and S9 or an 802. The one switch controls the fls. of the e.c. 2 rx. and the TX, and withdrawing the phone plug of the phones starts up the MG set. Very nice. Incidentally, we doped out an idea. Down on the Bay, leaks due to saltwater action are annoying, so we wound the phones as bias for the 37 amplifier. The case of the fones is as mild as mother's milk now. Ere this reaches the comps. the gang will have staged their annual effort for the Aero Club. 56MC, reporting from the pylons, has given many a corner-cutting flier a nasty feeling when the stewards grab him as he hops down. Of course, JX knocks 'em bandy over in W on 14MC. No strain at all for 4, ex 3, ex 7-JK. FN is quiet, getting started in on a new QRA. Very old-timer 4AZ is feeling his fingers itchy, and v.o.t. RB keeps his end of the RAAFWR free from verdigris. BB wields a wicked key up at Maryborough (Q.). Somewhat akin to the sunrise, up on the really long waves (200-250 metres) LW and JN hold forth.

Am 'most unwound. Council has before it certain problems of moment. See, you 'pounders from the Mallee and below on the Fisk trophy. Get busy, we have the showcase made and it's of best VK4 maple. Happy days, gang—more elbow-room and snapper operating on the 7000 region. No, I did not mention anything at all re a Vigilance Committee.

South Australian Division

By VK5KL

At the Xmas general meeting on 23rd December, the President, Mr. Barbia, welcomed Miss R. Longley, VK6YL, and also asked her to present the trophies won at the last field day held at Clare. Mr. Barber (5MV), 80mx hunt; Mr. D. Reiman, best 80mx receiver; Mr. M. Farmer, best 5mx transceiver; and Miss Malthouse, single women's race.

In future a Question Box will be available for members to ask any technical question, which will be answered at the meetings.

Due to member's complaint that the members of the local Vigilance Committee not having been made known. Mr. L. Deane, who is secretary, explained to the meeting the full workings in detail of the above committee, and gave permission for the personnel of the Vigilance Committee to be published exclusively in "Amateur Radio." It comprises:—Mr. Dean (5LD), Mr. Bowman (5FM), Mr. Barbier (5MD), Mr. De Cure (5KO), Mr. Golly (5JX), and Mr. Collins.

The recent traffic handling contest resulted in the winner being:—1st, 5HM, 74 points; 2nd, 5RI, 58 points; 3rd, 5RY, 48 points; and 4th, 5LL, 47 points.

Conditions on 28mc still remain bad, but chaps who intend working on this band should be ready when the band opens up again late in February and March.

Twenty metres still continues to attract those who like to qso DX, and several new countries may be worked around midnight. The faithful chaps to 40 metres still persist with QRM and QRN. I don't know which is worse when VK7YL calls CQ.

VKSYL is now active on 40 metres,

and would like co-operation from anyone hearing her calling, to test her gear out.

RECENT MIGRATION.

(I. V. Miller, VK3EG.)

Old-timers never die; they only fade away. A Christmas card from "Connie," ex-VS6AQ, reminds us that that fate does not await all of them. Although he has left Hong Kong, he will shortly re-appear from Bonnie Scotland under a G call sign.

I think our British Amateurs must surely outdo even their Yankee brethren in migratory ability, and it may be of interest to know just where some of them are located.

Emary, VS6AX, has been sent to Palestine, and awaits a ZC6 call.

VU2BL, ex-YI2DC, is now back in England, and active as G6MT. VU1AA has gone to Bahrein Island, and works on 14 mc as VS8AA. VU2FP is also back in England for good, and was recently qso'd through a London station.

Another one to go back home after a lengthy stay in Palestine was LC6FF.

Our old friend, VS1AJ, is now with the R.A.F. at Ambala, Punjab, India, and pending arrival of his new VU call is B.E.R.S. 311. Since Gil. left the second op. Bernie has taken out a licence, and may be worked as VS1AL on 14350 KC.

VQ2RS will not supply the Northern Rhodesian contact any more, as he informed me he was leaving for Nigeria last November, and hopes to be LD soon. However, LE1JT has recently gone to VQ2, so he will fill the gap. As if to further preserve the balance of things, G6ML will re-appear as a LE1 early this year.

Kenya Colony could ill-afford to lose any of its amateurs, but old VQ4CRL left there about 12 months ago, and he is now a 34 Cuney Street, Kimberley, South Africa.

SU1EC has long left for England, as has LB1i recently. EI6F is now in Liverpool.

Coming nearer home, ex-LL4AI is G5LL, and ex-VK2NR, Jack Scott, seems to be permanently settled as G6JB. They've snared his call for a B.C. station now, so guess we won't hear 2NR any more any way.



IN spite of the fact that there are tables available for the construction of tube base coils to cover any desired frequency range, there is always necessary that titter-vation and juggling to get the L/C ratios right. One must assume too much to rely on these tables. Wire gauges, dielectric constant of the former material, and spacing all naturally have a marked effect on the inductance of the coil.

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(Continued from page 7.)

From the picture of the rear of the transmitter it will be seen that all the rectifier tubes are mounted on a special aluminium chassis on the base of the frame. This allows easy installation and change of tubes when necessary; not forgetting freedom of air circulation.

The final article dealing with the modulator design and construction will follow next month, together with any practical operating dope that can be collected.

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Mr. F. Johns, a Director of P. and L. Wireless Supplies Pty. Ltd., of 31 Hardware Street, Melbourne has returned from a tour of the U.K. and the Continent. Our special representative had an interesting chat with Mr. Johns, and a report of his impressions will appear in our next issue.

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